

Unit 3 Lesson 5: People Need Plants

Focus Areas: Characteristics of Plants; Science

Focus Skills: observing, identifying, drawing conclusions

Objectives

- To identify parts of a plant
- To recognize the importance of plants in our daily diet

Essential Questions

- What are the parts of a plant?
- What parts of plants are important to people?

Essential Understandings

- Green plants make their own food.
- Plants have roots, stems, leaves, flowers, and seeds.
- Plants are the main food source for living things, including humans.
- Plants provide us with many vitamins to keep us healthy.

Background

Green plants are the only living things that can make their own food. Plants harness the energy that shines down on the Earth each day as light and use it to make their own food. Each leaf becomes a food factory as it converts the energy to simple sugars that feed the plant and enable it to grow.

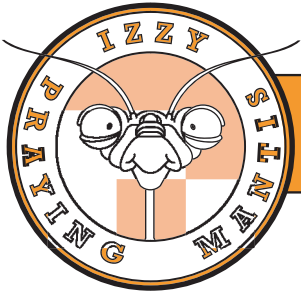
The roots of the plant anchor it and take nutrients from the soil. Stems carry food and water to other parts of the plant. Flowers produce seeds, and seeds produce new plants.

Plants are food for many other living things, mainly animals. Animals that eat only plants are called herbivores. Deer, zebras, cows, and other animals with hooves are examples of herbivores. Mammals, such as monkeys and gorillas, that only eat fruit and leaves are also in this group.

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Background (continued)

Carnivores, creatures that only eat meat, also depend on green plants. They feed on animals that feed on the plants. They become part of a food chain. All the plants and animals are connected to each other like links in a chain. Most food chains begin with plants. Therefore, most living things rely on plants to survive.

Vocabulary



flowers

the plant part that produces seeds

food chain

a pattern of predator and prey in which one organism provides food for another organism

fruit

the fleshy part of a plant that provides food

leaf

the plant part that changes energy from the sun to food for the plant

nectar

a liquid produced by some plants that provides food for bees



nuts

a food source produced by some plants

plant

a living thing that can use sunlight to produce food

root

the plant part that holds the plant in the soil and carries water and nutrients to the plant



seed

the part of the plant that enables new plants to grow

stem

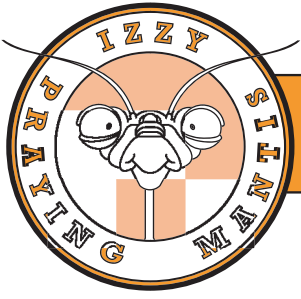
the part of the plant that carries food to the plant

Logistics

Time: 30 minutes

Group Size: 5 to 30

Space: a classroom



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Materials



plastic models, real examples, or pictures of crop foods humans eat:

- fruits (oranges, grapes)
- nuts (walnuts, almonds, cashews)
- roots (carrots, potatoes)
- leaves (lettuce, spinach)
- stems (celery, rhubarb)
- seeds (rice, wheat, beans)
- flowers (broccoli, cauliflower)

Izzy puppet *

picture cards of plants parts *

Overhead 1 and Handout 1 “Which Part?” *
chart paper or black/white board

* single copy provided

Preparation

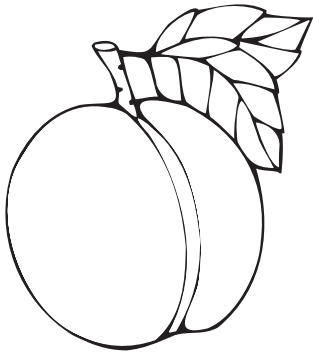
Collect pictures of plants that people eat or have students bring in samples. (Avoid real nuts if you have students with allergies.)

Set up overhead projector.

Make copies of Handout 1, “Which Part?” (one per child).

Activity

Introduction



1. Izzy asks the children, “What are your favorite foods?” (List them.) Distinguish healthy foods from the snack foods with lots of sugar.
2. Izzy tells the children that most foods on the Earth, including cookies and cakes, contain plant ingredients.
3. Izzy asks, “Why are plants important to people?” (They provide vitamins and minerals our bodies need to grow.)
4. Izzy explains that plants have many parts. Some of these plant parts are good to eat. People eat the fruits, nuts, roots, stems, seeds, or flowers of different plants.



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Involvement

1. Using Izzy, display each of the following words (**SEED**, **FRUIT**, etc.), define it, and ask the children to give examples of this kind of edible plant part.

SEED

Seeds are a very important part of any plant. They grow and sprout to make new plants. More importantly, people on the Earth eat tons of seeds every day. Many people in poorer countries depend on seeds to live. Seeds are a major part of the diet of people on the continents of India, Asia, and Africa.

- Can you think of what seeds people eat? (rice, wheat, beans)
- Name some animals that eat seeds. (birds, mice)

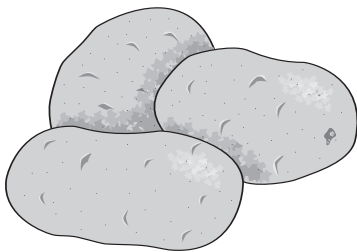


FRUIT

Fruit contains seeds covered by a sweet, tasty treat. (strawberries, apples, grapes, and melons) Show students an example and have them identify other “favorite fruits.”

NUT

A nut has a very hard shell that protects a seed. Show students an example and have them identify others. (almonds, walnuts, and peanuts) Ask the children if they have seen any animals that collect and store nuts for winter. (squirrels)



ROOT

Roots hold the plant in the soil and collect nutrients. The food that many plants make is stored in their roots, under the ground. Some edible roots may be called tubers. Show students examples and have the children identify them (carrots, potatoes, radishes, turnips, beets). People who grow gardens have problems with animals that dig and eat roots and tubers. What animal eats gardeners' carrots? (bunnies)



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LEAVES and STEMS

Leaves make food for plants using energy from the sun and stems carry the food to all parts of the plant. Show the students an example and have them identify others. (lettuce, spinach, celery, and rhubarb) Tell them that many animals eat leaves and stems. Can you name some? (Koalas feed on eucalyptus leaves and pandas eat mostly bamboo.)



FLOWERS

Izzy says, “Do you know that you eat flowers? Not every flower but the ones that are part of vegetable plants like broccoli and cauliflower. They have lots of important vitamins that keep us healthy. Flowers from other plants like roses and daisies have a sweet juice called nectar. Birds and bats feed on nectar. Bees make honey to feed their baby bees. Even humans eat honey!”



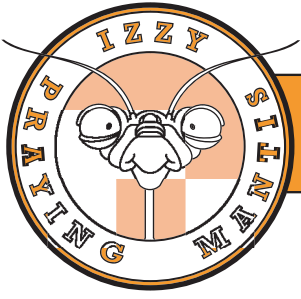
2. Distribute Handout 1, “Which Part?” and help the children complete it by circling the picture that corresponds to each plant part. There may be more than one picture per plant part. Say each plant part and point to it on the overhead.

Note: You may wish to do this on the overhead as well.

Follow Up

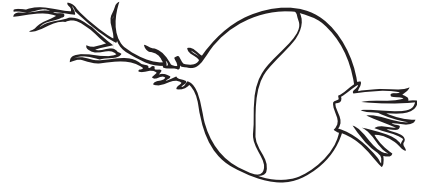
“Celery Stems”

Have the students put stalks of celery in water that has food coloring added to it. Have them observe how the colored water flows up the stem structure (xylem takes liquid up and phloem takes it down the stem). Explain that this is how the leaves get the water and nutrients from the soil and, with the energy from the sun, are able to make their own food. Explain that a BIG science word for this process is **PHOTOSYNTHESIS**.



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Notes

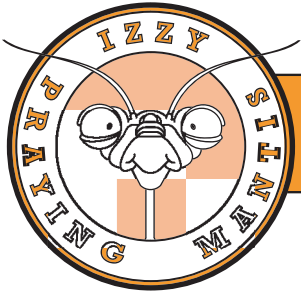




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